ABSTRACT

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Study Program	*: Eletrical Engineering*
Thesis Title	*: Effect of NaCl and MgCl Contamination on Flashover Voltage of Porcelain Insulators Using Slow Rate Of Rise Test Method*

Flashover is the value or size of the voltage that the insulator can withstand until the fire/flashover jumps on the insulator surface, flashover is caused by contamination or fouling attached to the insulator. This study aims to analyze the effect of NaCl and MgCl contamination in wet and dry conditions on the flashover voltage of porcelain insulators. NaCl and MgCl contamination of porcelain insulator flashover voltage has been studied in wet and dry conditions. The type of porcelain insulator used is a porcelain insulator type peg brand TE S125R. The concentration of NaCl and MgCl is varied from 0.5% - 20%. NaCl and MgCl solutions were sprayed on the insulator surface with a pressure of 2 Bar. Spraying is done gradually at angles of 30^o, 60^o, 90^o, 120^o on the insulator surface. Flashover voltage of contaminated porcelain insulators in wet and dry conditions is measured using a high voltage device (Hight Voltage) brand TERCO, flashover voltage testing method using the slow rate of rise test method. The results showed that for both contaminants, the flashover voltage of porcelain insulators is almost fixed at a solution concentration of 0.5% and 1% and then decreases successively for solution concentrations from 1.5% - 20%. dry condition contamination has a greater influence than wet condition contamination on porcelain insulators.

Keywords: insulator, flashover voltage, NaCl, MgCl, slow rate of rise test method